

IN THE CLAIMS

A complete listing of the claims follows and replaces any prior versions.

1 1. (Currently Amended) A data recording media comprising servo information
2 recorded on servo tracks interspersed between a plurality of extended format sectors, the
3 extended format sectors comprising a user data sector field for storing user data and a backup
4 indicator field for indicating the status of the user data sector field.

1 2. (Original) The data recording media of claim 1 wherein the backup
2 indicator field indicates whether the user data in the user data sector field has been written to
3 backup storage subsequent to a previous backup operation.

1 3. (Original) The data recording media of claim 1 wherein the backup
2 indicator comprises a single bit.

1 4. (Original) The data recording media of claim 1 wherein the backup
2 indicator comprises an indicator of whether the user data in the user data sector field has been
3 written to backup storage subsequent to a previous backup operation and data indicating the
4 age of the user data in the user data sector field.

1 5. (Original) The data recording media of claim 1 wherein the backup
2 indicator indicates whether the user data sector field has been written to.

1 6. (Original) A data storage system, comprising:
2 a magnetic storage medium having servo information recorded on servo tracks
3 interspersed between a plurality of extended format sectors;
4 a motor for moving the magnetic storage medium relative to a magnetic head
5 assembly; and
6 a head assembly having at least one read head for reading and writing data on the a
7 plurality of extended format sectors;
8 wherein the extended format sectors further comprises:
9 a user data sector field for storing user data; and
10 a backup indicator field for indicating the status of the user data sector field.

1 7. (Original) The data storage system of claim 6 wherein the backup
2 indicator field indicates whether the user data in the user data sector field has been written to
3 backup storage subsequent to a previous backup operation.

1 8. (Original) The data storage system of claim 6 wherein the backup
2 indicator comprises a single bit.

1 9. (Original) The data storage system of claim 6 wherein the backup
2 indicator comprises an indicator of whether the user data in the user data sector field has been
3 written to backup storage subsequent to a previous backup operation and data indicating the
4 age of the user data in the user data sector field.

1 10. (Original) The data storage system of claim 6 wherein the backup
2 indicator indicates whether the user data sector field has been written to.

1 11. (Original) A data storage system, comprising:
2 a host computer system;
3 a first set of storage volumes;
4 a second set of storage volumes for backing-up data from the first set of storage
5 volumes; and
6 a controller for controlling the transfer of data from the host system to the first and
7 second set of storage volumes, wherein at least the first set of storage volumes further
8 comprises data recording media including a plurality of extended format sectors, the
9 extended format sectors comprising a user data sector field for storing user data and a backup
10 indicator field for indicating the status of the user data sector field.

1 12. (Original) The data storage system of claim 11 wherein the backup
2 indicator field indicates whether the user data in the user data sector field has been written to
3 backup storage subsequent to a previous backup operation.

1 13. (Original) The data storage system of claim 11 wherein the backup
2 indicator comprises a single bit.

1 14. (Original) The data storage system of claim 11 wherein the backup
2 indicator comprises an indicator of whether the user data in the user data sector field has been
3 written to backup storage subsequent to a previous backup operation and data indicating the
4 age of the user data in the user data sector field.

1 15. (Original) The data storage system of claim 11 wherein the backup
2 indicator indicates whether the user data sector field has been written to.

1 16. (Original) The data storage system of claim 12 wherein the first set of
2 storage volumes is arranged as a virtual space wherein the host views the configuration as
3 being a storage device having a first predetermined size and the controller allocates storage
4 space from the first set of storage volumes having a physically smaller size than viewed by
5 the host.

1 17. (Original) The data storage system of claim 16 wherein the controller
2 periodically determines which sectors have been written using the backup indicator to predict
3 when the host will need additional physical space.

1 18. (Original) The data storage system of claim 16 wherein the controller
2 allocates additional storage space on the first set of storage volumes before the host requires
3 additional storage space to minimize delays to the host.

1 19. (Original) The data storage system of claim 18 wherein the controller
2 reads the backup indicator to determine when a usage threshold have been exceeded.

1 20. (Currently Amended) A method for tracking the status of writes to areas of a
2 storage device, comprising:

3 a) initializing a storage system and clearing a backup indicator field in an
4 extended format sector used for indicating the status of a user data sector field of the
5 extended format sector;

6 b) setting the backup indicator when a host writes to a user data sector field; and

7 c) reading every sector included in a host user area of ~~[[the]]~~ a system drive and
8 backing-up only user data sector field in the extended format sectors having the backup
9 indicator field set.

1 21. (Original) The method of claim 20 further comprising:

2 d) clearing the backup indicator field after the user data sector field has been
3 backed-up.

1 22. (Original) The method of claim 21 further comprising repeating b)-d) for
2 each subsequent backup.